STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING  FORM 3  AMENDED REPORT								
APPLI	CATION FOR	PERMIT TO DRILL	-		1. WELL NAME and	I NUMBER hurston 7-9-9-24GR		
2. TYPE OF WORK  DRILL NEW WELL	REENTER P8	ka well 📄 Deepe	N WELL		3. FIELD OR WILD	CAT EVILS PLAYGROUND		
4. TYPE OF WELL Oil We	ell Coalb	ed Methane Well: NO			5. UNIT or COMMU	INITIZATION AGRE	EMENT NAME	
6. NAME OF OPERATOR	THURSTON ENER	RGY OPERATING			7. OPERATOR PHO	<b>NE</b> 214 704-3896		
8. ADDRESS OF OPERATOR 365 \	W. 50 N. Ste W-8	3, Vernal, UT, 84078			9. OPERATOR E-MA	AIL on@thurstonenergy.c	com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU-5217		11. MINERAL OWNE	RSHIP DIAN STATE (	FEE	12. SURFACE OWN	IERSHIP IDIAN STATE	FEE	
13. NAME OF SURFACE OWNER (if box 12	= 'fee')				14. SURFACE OWN	IER PHONE (if box	12 = 'fee')	
15. ADDRESS OF SURFACE OWNER (if box	12 = 'fee')			<u> </u>	16. SURFACE OWN	IER E-MAIL (if box	12 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')		18. INTEND TO COM MULTIPLE FORMATI YES (Submit C		_	19. SLANT  VERTICAL DI	RECTIONAL 📄 H	ORIZONTAL 🗍	
20. LOCATION OF WELL	FO	OTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	2067 FI	NL 2070 FEL	SWNE	9	9.0 S	24.0 E	S	
Top of Uppermost Producing Zone	2067 FI	NL 2070 FEL	SWNE	9	9.0 S	24.0 E	S	
At Total Depth	2067 FI	NL 2070 FEL	SWNE	9	9.0 S	24.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	EAREST LEASE LIN 2067	E (Feet)	23. NUMBER OF AC	CRES IN DRILLING 120	UNIT	
		25. DISTANCE TO N (Applied For Drilling		AME POOL	26. PROPOSED DEPTH  MD: 5000 TVD: 5000			
27. ELEVATION - GROUND LEVEL		28. BOND NUMBER	UT-000181	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE White River Permit #49-2286				
		A	TTACHMENTS					
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORDAN	CE WITH THE UT	ΓAH OIL AND	GAS CONSERVAT	ION GENERAL R	ULES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUR	RVEYOR OR ENGINEER	г	PLETE DRILLIN	G PLAN			
AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE) FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER								
DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY TOPOGRAPHICAL MAP								
NAME Russell H. Cox	TIT	<b>「LE</b> Operations Manager	r	PHONE 435 789-8580				
SIGNATURE         DATE 12/14/2010				EMAIL rus	sell.cox@thurstonenerg	gy.com		
API NUMBER ASSIGNED APPROVAL 43047514100000				Book	oogylll			
Pe					rmit Manager			

API Well No: 43047514100000 Received: 12/14/2010

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	8.625	0	2000		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2000	24.0			

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API Well No: 43047514100000 Received: 12/14/2010

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	5.5	0	5000		
Pipe	Grade	Length	Weight			
	Grade N-80 LT&C	5000	17.0			Г

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365 West 50 North STE. W-8 Vernal, UT 84078 (435)789-8580

#### 10 Point Plan

#### **Thurston Energy Operating Company**

#### **Thurston 7-9GR**

Surface Location SW ¼ NE ¼ Section 9, T. 9S., R. 24E.

#### 1. Surface Formation

Green River

#### 2. Estimated Formation Tops and Datum

Formation	Depth	Datum
Green River	Surface	+5,194' G.L.
Wasatch	4,330'	+864'
TD	5,000'	+194

A 12 ¼" hole will be drilled to 2,000'±. The hole will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

#### 3. Production Formation Depth

Formation objective includes the Green River and its sub-members.

#### Off Set Well information:

#### Permitted/Drilled:

RWS #3MU-9-9-24 Bonanza 16-8

#### **Abandon Location:**

Little Bonanza Fed #1-3 NGC #43-8 State #14-16

#### **Abandon Wells:**

Little Bonanza #1-4 Dirty Devil #U1-9 Bonanza #2B-16

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#### **Producing Wells:**

Thurston 7-9 Devils Playground #41-9 Bonanza #4D-16

## 4. Proposed Casing:

Bonanza #40	D-16			1		
Proposed C	asing:			TIAL		
Hole	Casing	Weight	J.C.	Coupling	Casing	New/
Size	Size	#/FT	Grade	&Thread	Depth	Used
12 1⁄4"	8 <sup>5</sup> / <sub>8</sub> "	24#	J-55	STC	2000'	New
7 <sup>7</sup> / <sub>8</sub> "	5 ½"	17#	N-80	LTC	5000'	New

#### **Cement Program:**

### Surface Casing will be cemented from 2000' to surface as follows:

	Casing <u>Size</u>	Cement Type	Cement Amounts	Cement Yield	Cement Weight
Lead	8 <sup>5</sup> / <sub>8</sub> "	Premium V	250 <sup>sks</sup> ±	3.82ft <sup>3</sup>	11.0 <sup>ppg</sup>
		Prem Lite II05# Static free, .25#/s 5#sk KOL Seal, . 10% Bentonite, .5	sk Cello Flake,	L	
Tail	8 <sup>5</sup> / <sub>8</sub> "	Premium G	300 <sup>sks</sup> ±	1.15ft <sup>3</sup>	15.8 <sup>ppg</sup>
		Class "G", 2% Ca 25#sk Cello Flake	,		
Top Job	8 <sup>5</sup> / <sub>8</sub> "	Premium G	100 <sup>sks</sup> <u>+</u>	1.15ft <sup>3</sup>	15.8 <sup>ppg</sup>
		4% CaCL2, .25#/sk Cello Flat	ke		

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#### Production Casing will be cemented from TD to 1800' or higher as follows:

	Casing <u>Size</u>	Cement Type	Cement Amounts	Cement Yield	Cement Weight
Lead	5 ½"	Premium V	220 <sup>sks</sup> <u>+</u>	3.82ft <sup>3</sup>	11.0 <sup>ppg</sup>
		Prem Lite II05#, Static free, .25#/s 5#sk KOL Seal, .0 10% Bentonite, .5%	Cello Flake,	AL	
Tail	5 ½"	Premium G Class "G", .05% St 2 NaCi, .1% R-3, 2	•	1.56ft <sup>3</sup>	14.3 <sup>ppg</sup>

#### 5. BOP and pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000 psi WP BOP system as described in the BOP and pressure Containment Data (attached) will be installed and maintained from the 8  $^5/_8$ " surface casing. The BOP system including the casing will be pressure tested to minimum standers set forth in "On Shore Order #2". The BOP will be mechanically checked daily during drilling operations.

#### 6. Mud Program:

Interval	Mud <sup>wt</sup> lbs/gal	Vis. Sec/qt	Fluid Loss M1/30 <sup>mins</sup>	Mud Type
0-2000	Air/clear water	N/A	No control	Air/Water
2000-TD	8.4-11.5	30	8-10	Water/Gel

#### 7. Auxiliary Equipment:

Upper Kelly cock, full opening stabbing valve, 2 ½" choke manifold and pit level indicator.

365 West 50 North STE. W-8 Vernal, UT 84078 (435)789-8580

#### 8. Testing, Coring, Sampling and logging:

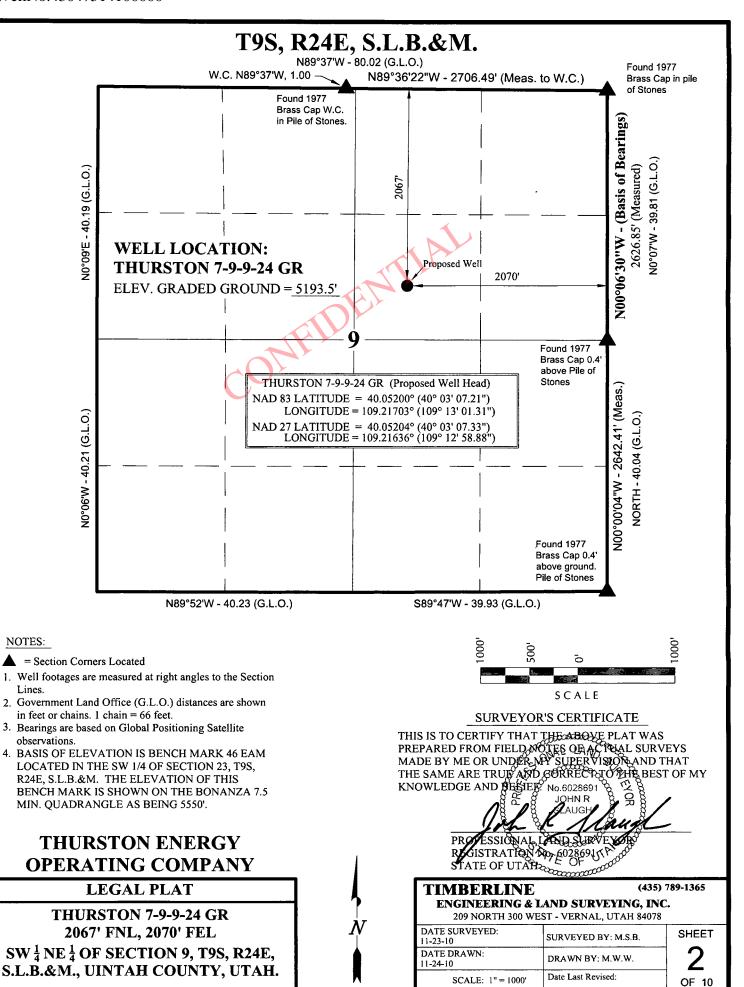
- a) Test: None are anticipated
- b) Coring: Possibility of sidewall coring
- c) Sampling: Every 10' from 2000' to TD
- d) Logging: Type: DLL/SFL W/GR and SP @ Interval: TD to Surface Casing. Type: FDC/CNL W/GR and CAL @ interval: TD to Surface Casing.

## 9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Green River and Wasatch formations. Other wells drilled in the area have not encountered over pressured zones or H2S.

#### 10. Drilling Schedule:

The anticipated starting date is 02/01/2011 Duration of operations is expected to be 15 days.



'APIWellNo:43047514100000'

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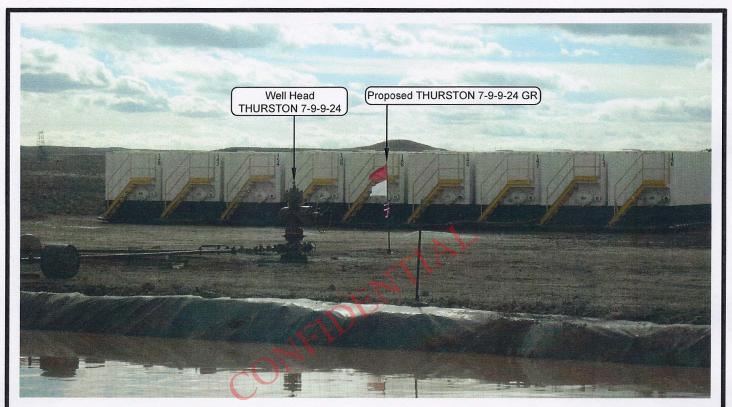


PHOTO VIEW: FROM PIT TO LOCATION STAKE

**CAMERA ANGLE: SOUTHWESTERLY** 



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

### THURSTON ENERGY OPERATING COMPANY

#### **LOCATION PHOTOS**

THURSTON 7-9-9-24 GR 2067' FNL, 2070' FEL SW  $^1_4$  NE  $^1_4$  OF SECTION 9, T9S, R24E, S.L.B.&M., UINTAH COUNTY, UTAH.

## **TIMBERLINE**

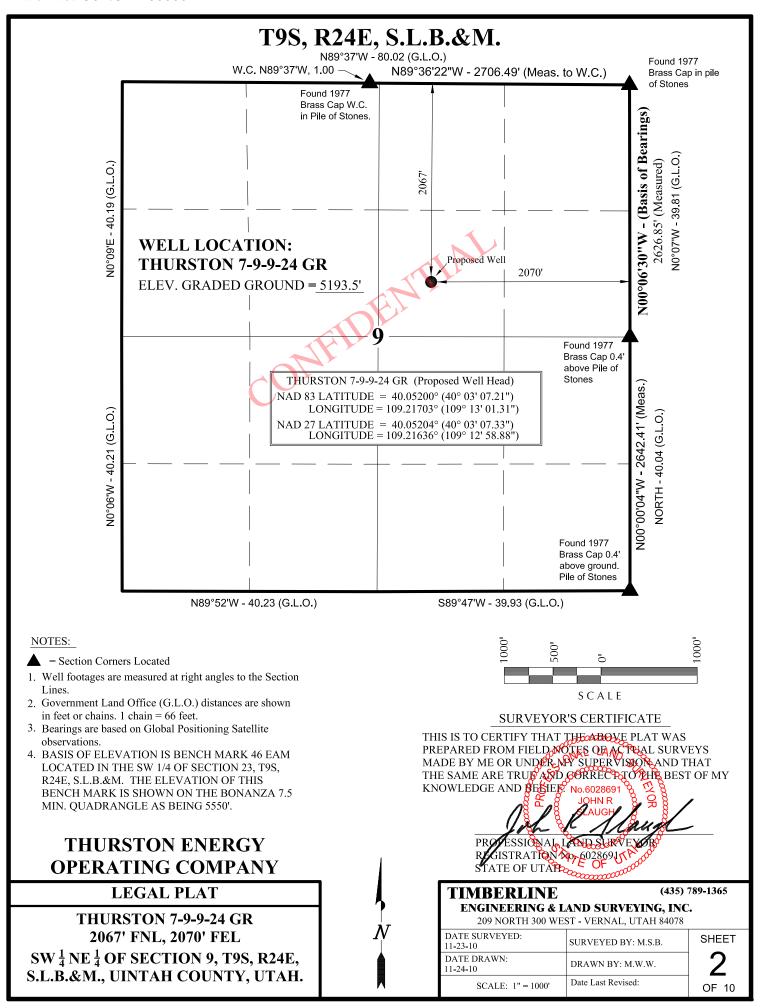
(435) 789-1365

OF 10

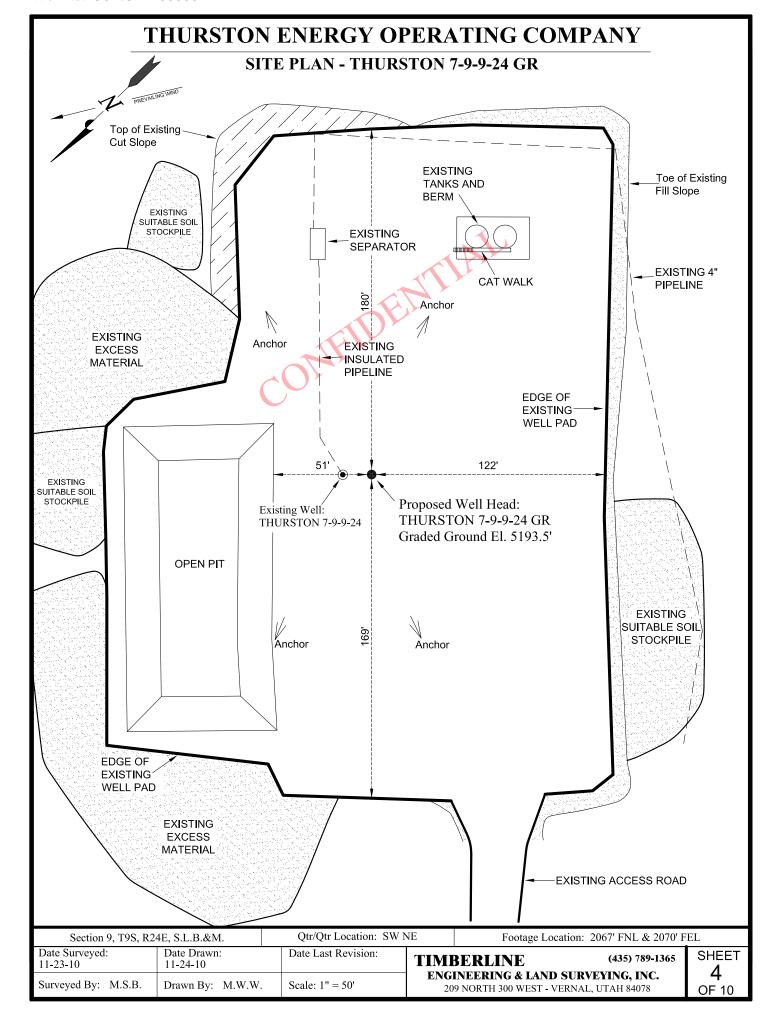
ENGINEERING & LAND SURVEYING, INC.

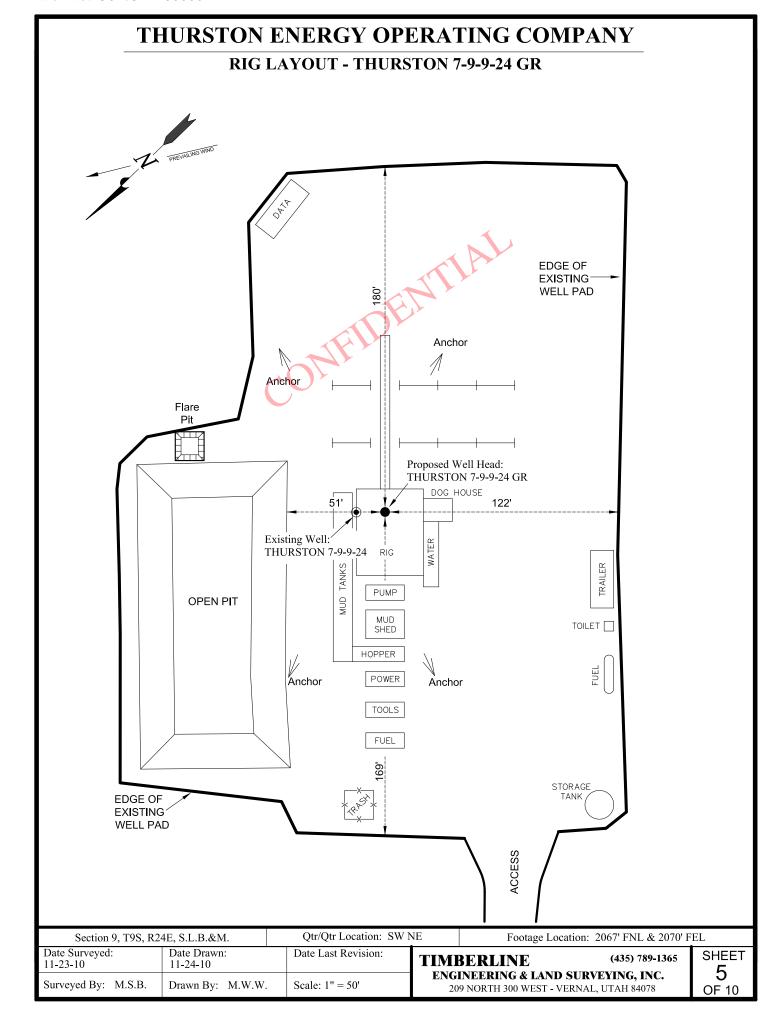
209 NORTH 300 WEST - VERNAL, UTAH 84078
PHOTOS TAKEN: PHOTOS TAKEN BY: M.S.B. SHEET

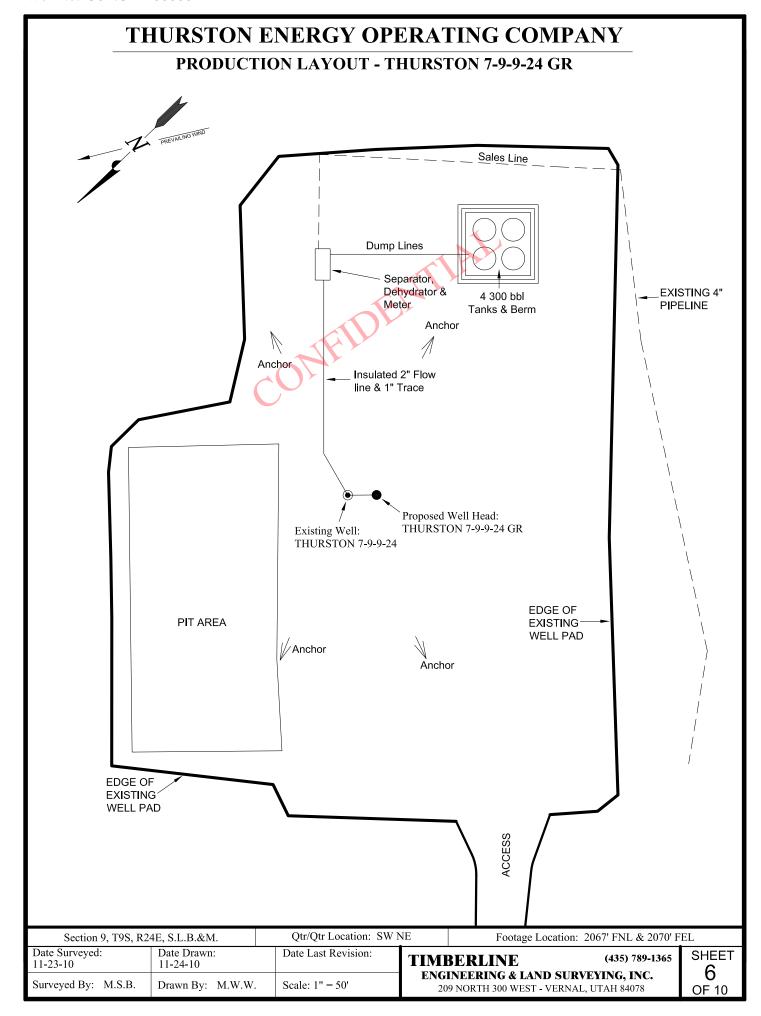
DATE PHOTOS TAKEN: 11-23-10	PHOTOS TAKEN BY: M.S.B.
DATE DRAWN: 11-24-10	DRAWN BY: M.W.W.
Date Last Revised:	



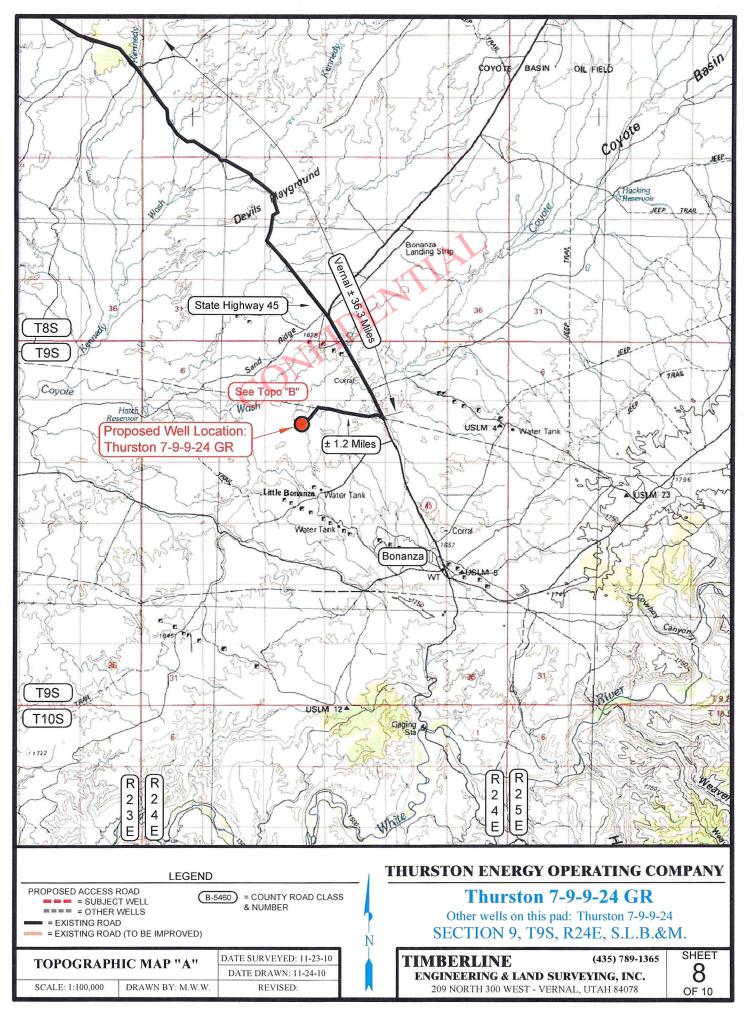
		SIII	RFACE POSITI	ON		
WELL NAME		D83	NAI	27		
THURSTON	<b>LATITUDE</b> 40°03'07.21"N	<b>LONGITUDE</b> 109°13'01.31"W		<b>LONGITUDE</b> 109°12'58.88"W	FOOTAGES 2067' FNL	
7-9-9-24 GR	40.05200°N	109.21703°W	40.05204°N	109.21636°W	2070' FEL	
THURSTON 7-9-9-24	40°03'07.31"N 40.05203°N	109°13'01.18"W 109.21699°W		109°12'58.75"W 109.21632°W	2056' FNL 2060' FEL	
E2	XISTING W	VELL: THU THURSTON	RSTON 7-9 N43°38'16"E 1 N 7-9-9-24 C	OPEN  0-9-24 15.02  © GR	PIT	BASIS OF BEARINGS IS THE EAST LINE OF THE NE 1/4 OF SECTION 9, T9S, R24E, 6th P.M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE INFORMATION TO BEAR N00°06′30″W.  GRADED GROUND ELEVATION OF PAD IS 5193.5°.
		TON ENI				SCALE
OF	PERATI	NG CON	<b>IPANY</b>			SCALE
		TERFERE		AT		<b>TIMBERLINE</b> (435) 789-1365
		RSTON 7-				ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078
						DATE SURVEYED: PHOTOS TAKEN BY: M.S.B. SHEET
		CCTION 9				DATE DRAWN: DRAWN BY: MWW
S.L.B.&I	vi., UINT	AH COU	NTY, UT	AH.		11-24-10
						Date Last Revised: OF 10

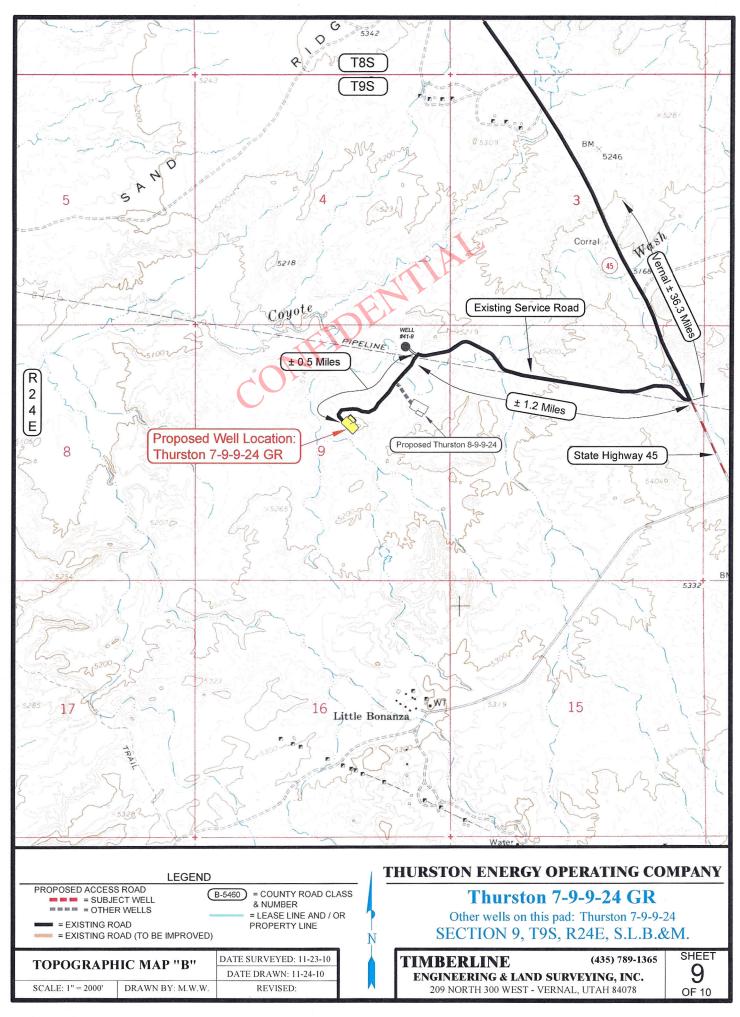


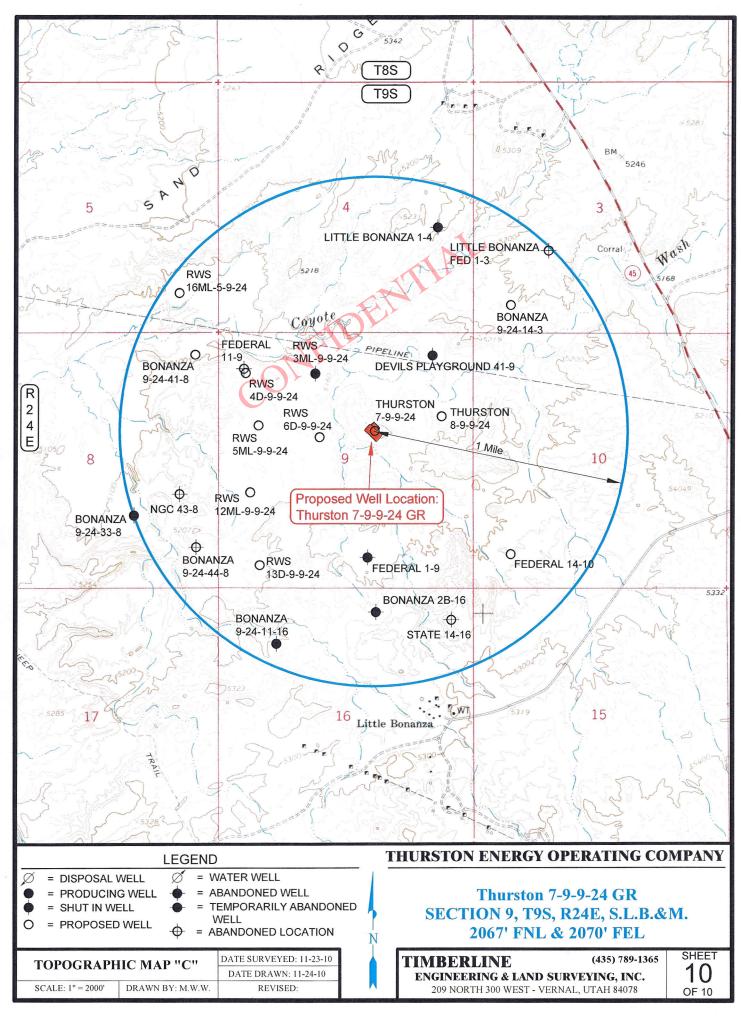




#### THURSTON ENERGY OPERATING COMPANY INTERIM RECLAMATION DIAGRAM - THURSTON 7-9-9-24 GR SUITABLE SOIL STOCKPILE AFTER RECLAMATION EXCESS MATERIAL AFTER RECLAMATION **Facilities** ØO $\bigcirc\bigcirc$ **EXCESS MATERIAL** EXISTING 4" BEFORE RECLAMATION **PIPELINE** SUITABLE SOIL STOCKPILE **THURSTON** BEFORE RECLAMATION 5190 7-9-9-24 GR 5198 THURSTON SUITABLE SOIL STOCKPILE 7-9-9-24 AREA TO BE AFTER RECLAMATION RECLAIMED -Access 5186 EXCESS MATERIAL BEFORE RECLAMATION Access = Anchor 1. PRODUCTION EQUIPMENT LOCATION Area to be Reclaimed and Vegetated COULD VARY DUE TO SITE AND OPERATION EFFECTIVENESS. 2.TOTAL DISTURBED AREA: ±2.70 ACRES 100 ±0.77 ACRES RECLAIMED AREA: UN-RECLAIMED AREA: ±1.93 ACRES CONTOUR INTERVAL = 2' SCALE Qtr/Qtr Location: SW NE Footage Location: 2067' FNL & 2070' FEL Section 9, T9S, R24E, S.L.B.&M. Date Surveyed: Date Drawn: Date Last Revision: SHEET (435) 789-1365 TIMBERLINE 11-24-10 11-23-10 ENGINEERING & LAND SURVEYING, INC. Surveyed By: M.S.B. Drawn By: M.W.W. Scale: 1'' = 100'209 NORTH 300 WEST - VERNAL, UTAH 84078 OF 10



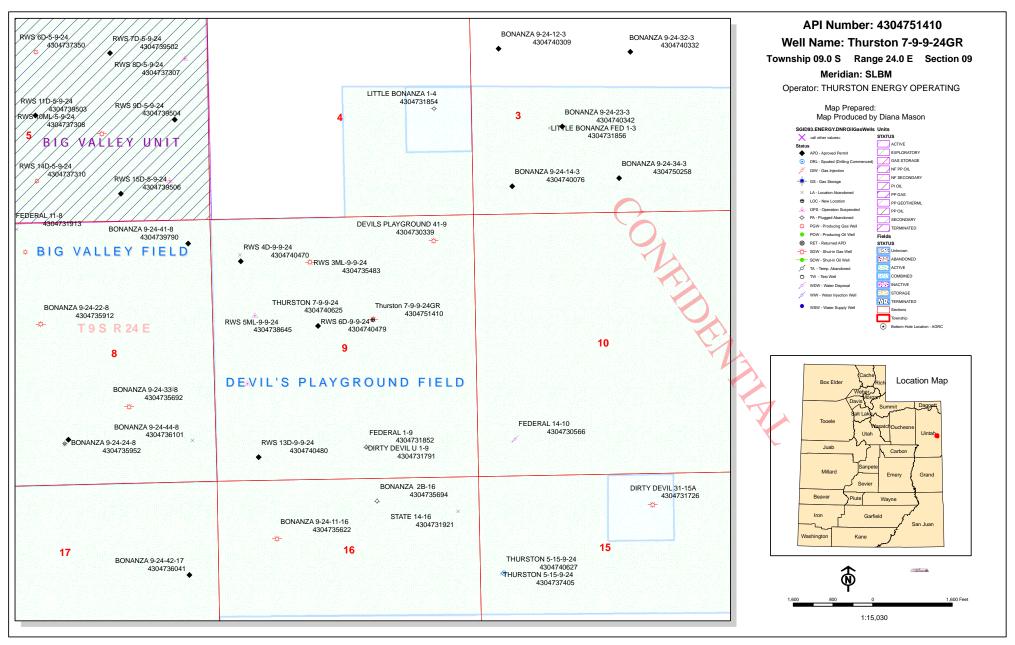




## THURSTON ENERGY OPERATING COMPANY Thurston 7-9-9-24 GR Section 9, T9S, R24E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 33.0 miles to the junction of a service road to the northwest. Exit right and proceed in a northwesterly direction along the service road approximately 1.2 miles to the access road serving the Thurston 7-9-9-24 well pad. Exit left and proceed in a southwesterly direction along the access road approximately 0.5 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 38.0 miles.



#### WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 12/14/2010 **API NO. ASSIGNED:** 43047514100000 WELL NAME: Thurston 7-9-9-24GR **OPERATOR:** THURSTON ENERGY OPERATING (N2790) **PHONE NUMBER:** 435 789-8580 **CONTACT:** Russell H. Cox PROPOSED LOCATION: SWNE 09 090S 240E Permit Tech Review: SURFACE: 2067 FNL 2070 FEL **Engineering Review: BOTTOM: 2067 FNL 2070 FEL** Geology Review: **COUNTY: UINTAH LATITUDE:** 40.05193 **LONGITUDE:** -109.21639 **UTM SURF EASTINGS: 652141.00** NORTHINGS: 4434835.00 FIELD NAME: DEVILS PLAYGROUND LEASE TYPE: 1 - Federal **LEASE NUMBER:** UTU-5217 PROPOSED PRODUCING FORMATION(S): GREEN RIVER SURFACE OWNER: 1 - Federal **COALBED METHANE: NO RECEIVED AND/OR REVIEWED: LOCATION AND SITING:**  PLAT R649-2-3. Bond: FEDERAL - UT-000181 Unit: **Potash** R649-3-2. General Oil Shale 190-5 Oil Shale 190-3 R649-3-3. Exception Oil Shale 190-13 Drilling Unit **Water Permit:** White River Permit #49-2286 Board Cause No: Cause 179-15 **RDCC Review:** Effective Date: 7/17/2008 Siting: 460' From Exterior Boundary **Fee Surface Agreement** R649-3-11. Directional Drill **Intent to Commingle Commingling Approved Comments:** Presite Completed

Stipulations:

4 - Federal Approval - dmason

API Well No: 43047514100000



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### **Permit To Drill**

\*\*\*\*\*\*

Well Name: Thurston 7-9-9-24GR

**API Well Number:** 43047514100000

Lease Number: UTU-5217 Surface Owner: FEDERAL Approval Date: 12/21/2010

#### Issued to:

THURSTON ENERGY OPERATING, 365 W. 50 N. Ste W-8, Vernal, UT 84078

#### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 179-15. The expected producing formation or pool is the GREEN RIVER Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available) OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov

#### **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month

API Well No: 43047514100000

- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

For John Rogers Associate Director, Oil & Gas Sundry Number: 1-5759 Approval of this: 43047514100000

Action is Necessary

	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-5217		
SUNDF	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	sals to drill new wells, significantly deepen exisugged wells, or to drill horizontal laterals. Use A		7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: THURSTON 7-9-9-24GR		
2. NAME OF OPERATOR: THURSTON ENERGY OPERATION	NG		9. API NUMBER: 43047514100000		
3. ADDRESS OF OPERATOR: 365 W. 50 N. Ste W-8 , Verna	PHONE N al, UT, 84078 214 704-3896 E		9. FIELD and POOL or WILDCAT: DEVILS PLAYGROUND		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2067 FNL 2070 FEL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI	IP, RANGE, MERIDIAN: D Township: 09.0S Range: 24.0E Meridian: S		STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	☐ ACIDIZE ☐	ALTER CASING	CASING REPAIR		
Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	✓ CHANGE WELL NAME		
6/10/2011	☐ CHANGE WELL STATUS ☐	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN ☐	FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
SPUD REPORT	☐ PRODUCTION START OR RESUME ☐	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud:	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
	☐ TUBING REPAIR ☐	VENT OR FLARE	☐ WATER DISPOSAL		
DRILLING REPORT Report Date:	☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	APD EXTENSION		
	□ WILDCAT WELL DETERMINATION □	OTHER	OTHER:		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Please be advised that we wish to revise the original application on the well as follows: Change name from Thurston 7-9-9-24GR to new name of Thurston 7-9-9-24 WA Change proposed depth from 5,000' to 8,000', please find attached new drilling program.  Approved by the Utah Division of Oil, Gas and Mining  Date:  06/20/2011  By:					
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE			
Patti Cox	435 789-8580	Operations Manager			
SIGNATURE N/A		<b>DATE</b> 6/10/2011			

# 10 Point Plan Thurston Energy Operating Company Thurston 7-9WA

Surface Location SW 1/4 NE 1/4 Section 9, T. 9S., R. 24E.

#### 1. Surface Formation

Green River

#### 2. Estimated Formation Tops and Datum

Formation	Depth	Datum
Green River	Surface	+5,194' G.L.
Wasatch	4,330'	+864'
Mesaverde	6,010	-816'
TD	8,000	-2,806'

A 12 1/4" hole will be drilled to 2,000'+. The hole will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

#### 3. Production Formation Depth

Formation objective includes the Wasatch and its sub-members.

#### Off Set Well information:

#### Permitted/Drilled:

RWS #3MU-9-9-24 Bonanza 16-8

#### **Abandon Location:**

Little Bonanza Fed #1-3 NGC #43-8 State #14-16

#### **Abandon Wells:**

Little Bonanza #1-4 Dirty Devil #U1-9 Bonanza #2B-16

#### **Producing Wells:**

Thurston 7-9 Devils Playground #41-9 Bonanza #4D-16

#### 4. Proposed Casing:

Hole Casing Weight Coupling Casing New/ &Thread Size Size #/FT Grade Depth Used 12 1/4" 8 5/8" 2000' New 24# J-55 STC 7 7/8" 5 1/2" 17# N-80 LTC 5000' New

#### **Cement Program:**

#### Surface Casing will be cemented from 2000' to surface as follows:

Casing Cement Cement Cement
Size Type Amounts Yield Weight
Lead 8 5/8" Premium V 250sks+ 3.82ft3 11.0ppg
Prem Lite II. .05#/sk
Static free, .25#/sk Cello Flake,
5#sk KOL Seal, .002 gps FP-6L,
10% Bentonite, .5% Na2SiO3, 3% KCL

Tail 8 5/8" Premium G 300sks+ 1.15ft3 15.8ppg Class "G", 2% CaCl2, 25#sk Cello Flake

Top Job 8 5/8" Premium G 100sks+ 1.15ft3 15.8ppg 4% CaCL2, .25#/sk Cello Flake

#### Production Casing will be cemented from TD to 1800' or higher as follows:

Casing Cement Cement Cement
Size Type Amounts Yield Weight
Lead 5 ½" Premium V 220<sub>sks</sub>+ 3.82ft<sub>3</sub> 11.0<sub>ppg</sub>
Prem Lite II. .05#/sk
Static free, .25#/sk Cello Flake,
5#sk KOL Seal, .002 gps FP-6L,
10% Bentonite, .5% Na2SiO3, 3% KCL

Tail 5 ½" Premium G 450<sub>sks</sub>+ 1.56ft<sub>3</sub> 14.3<sub>ppg</sub> Class "G", .05% Static Free, 2 NaCi, .1% R-3, 2% Bentonite

#### 5. BOP and pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000 psi WP BOP system as described in the BOP and pressure Containment Data (attached) will be installed and maintained from the 8 5/8" surface casing. The BOP system including the casing will be pressure tested to minimum standers set forth in "On Shore Order #2". The BOP will be mechanically checked daily during drilling operations.

#### 6. Mud Program:

Interval Mudwt lbs/gal Vis. Sec/qt Fluid Loss M1/30<sub>mins</sub> Mud Type 0-2000 Air/clear water N/A No control Air/Water 2000-TD 8.4-11.5 30 8-10 Water/Gel

#### 7. Auxiliary Equipment:

Upper Kelly cock, full opening stabbing valve, 2 ½" choke manifold and pit level indicator.

#### 8. Testing, Coring, Sampling and logging:

a) Test: None are anticipated

b) Coring: Possibility of sidewall coring

c) Sampling: Every 10' from 2000' to TD

d) Logging: Type: DLL/SFL W/GR and SP @ Interval: TD to Surface Casing. Type: FDC/CNL W/GR

and CAL @ interval: TD to Surface Casing.

#### 9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Green River and Wasatch formations. Other wells drilled in the area have not encountered over pressured zones or H2S.

Thurston Energy Operating Company (Thurston) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling

This Standard Operating Practices addendum provides supporting information as to why Thurston current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A convention rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, Thurston has used the air rig layout and procedures outlined below to drill the surface casing hole in 4 wells in the Bonanza Area without incident of blowout or loss of life.

#### **Background**

In a typical well Thurston utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,600' to 2,000'. The air rig drilling operation does not drill through productive or over pressured formations in Thurston's field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is then mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

Thurston fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in Thurston's fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not e required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rig utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit will supply the water to the well bore.

#### Variance for Special Drilling Operations (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a Thurston location.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a Thurston well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction fron the blooie line and a minimum of 100 feet from the well bore. At the Thurston locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors are located on the rig (1250 cfm) and on a standby trailer (1160 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Variance for FIT Requirements**

Thurston also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as formation integrity test (FIT). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### Conclusion

The air rig operating procedures and rig layout have effectively maintained well control while drilling the surface holes in Thurston Fields. Thurston respectfully requests a variance from Onshore Order 2 with respect to air drilling control requirements as discussed above.

#### 10. Drilling Schedule:

The anticipated starting date is 02/01/2011 Duration of operations is expected to be 15 days.

## RECEIVED

DEC 1 6 2010

Form 3160-3	1	TO I D LUIG		FORM	APPROVED		
(August 2007)  UNITED STATES  DEPARTMENT OF THE INTERIOR				OMB No	o. 1004-0137		
				Expires July 31, 2010  5. Lease Serial No. UTU-5217			
				APPLICATION FOR PERIMIT 10	J DRILL OF	REENIER	
la. Type of work: ✓ DRILL REENTER			7. If Unit or CA Agre	ement, Nam	ne and No.	_	
lb. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone				8. Lease Name and Well No. Thurston 7-9-9-24 WA			
Name of Operator Thurston Energy Operating Company				9. API Well No. 4304751410			
3a. Address 360 W 50 N W-8	1	. (include area code)		10. Field and Pool, or Exploratory			
Vernal, UT 84078	435-789-8	580		Devil's Playground			
4. Location of Well (Report location clearly and in accordance with	arty State requiren	nents.*)		11. Sec., T. R. M. or B	lk. and Surv	ey or Area	
At surface 2067' FNL 2070' FEL SWNE Sec9, T9S, R2	24E, SLB&M			Sec. 9, T9S, R24E	SLB&M		
At proposed prod. zone same							
<ol> <li>Distance in miles and direction from nearest town or post office*</li> <li>miles south iof Vernal, Utah</li> </ol>				12. County or Parish Uintah	1	13. State Ut	
15. Distance from proposed* 2067' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of a	acres in lease	ng Unit dedicated to this	well			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Propose 8,000'			/BIA Bond No. on file 00181			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5193.5 GL	22. Approxi 08/01/201	Approximate date work will start*  3/01/2011		23. Estimated duration 8 days	n		—
	24. Atta	chments					
The following, completed in accordance with the requirements of Ons	hore Oil and Gas	Order No.1, must be a	ttached to th	is form:			
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> </ol>		4. Bond to cover t Item 20 above).	he operatio	ons unless covered by an	. existing bo	nd on file (	see
<ol> <li>A Surface Use Plan (if the location is on National Forest Syste SUPO must be filed with the appropriate Forest Service Office).</li> </ol>	m Lands, the	<ul><li>5. Operator certifie</li><li>6. Such other site</li><li>BLM.</li></ul>		ormation and/or plans as	s may be rec	quired by th	e
25. Signature	Name	(Printed/Typed)			Date		=
tatti Co	Patti	A. Cox		<u> </u>	12/29/20	<b>010</b>	
Title Business Manger							
Approved by (Signature)		(Printed/Typed) Jerry F	<b>Sencz</b>	ːka	Date A	UG 12	20
Title Assistant Field Manager Lands & Mineral Resources	Office	VERN		LD OFFICE			
Application approval does not warrant or certify that the applicant he conduct operations thereon.  Conditions of approval, if any, are attached.		itable title to those righ APPROVAL AT			entitle the ap	plicant to	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations	crime for any p	erson knowingly and within its jurisdiction.	willfully to r	nake to any department	or agency o	f the United	<u></u>

\*(Instructions on page 2)

AUG 1 8 2011

DIV. OF OIL, GAS & MINING



(Continued on page 2)



#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE**

**VERNAL, UT 84078** 

(435) 781-4400



#### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No: API No:

**Thurston Energy Operating Company Location:** 

Thurston 7-9-9-24 WA

170 South 500 East

43-047-51410

Lease No: Agreement:

SWNE, Sec. 9, T9S, R24E

UTU-5217

N/A

OFFICE NUMBER:

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

#### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut vn opreport@blm.gov.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 8 Well: Thurston 7-9-9-24 WA 8/11/2011

#### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

7-9-9-24 WA, 13-20-9-24, 5-27-9-24, 15-27-9-24, 9-7-9-24, 13-19-9-24, 8-20-9-24 and the 10-7-9-24. DOI-BLM-UT-G010-2011-0317-EA

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop
  work and contact the Authorized Officer (AO). A determination will be made by the AO as to what
  mitigation may be necessary for the discovered paleontologic material before construction can
  continue.

## Additional Surface Conditions of Approval or monitoring are listed in the Surface Use Plan of the APDs.

- Construction and drilling activities are not allowed from January 1 August 31 to minimize impacts during golden eagle nesting. This timing limitation only applies to Section 19, T9S, and R24E.
- If it is anticipated that construction and drilling activities will occur during any of the given timing restrictions, a BLM or qualified biologist should be notified so surveys can be conducted.
   Depending upon the results of the surveys, permission to proceed may or may not be granted by the Authorized Officer.
- See mitigation / applicant committed design features in EA-0317 for more specifics on conditions of approval for potential air quality impacts
- All production tanks except on the 7-9-9-24 location will be placed towards the front of the well pad
  to maximize interim reclamation, and lessen the potential long term impacts that could occur to soils
  and vegetation.
- Topsoil shall be wrapped around corner #10 for the 5-27-9-24 location as discussed on the onsite 6/30/2010.
- All access roads shall be built to BLM standards. The crown and ditch method is the standard
  which helps control runoff from increasing potential erosion rates to the road surfaces. This will
  also help divert any seasonal flows off the road into vegetated areas to increase the chance for

Page 3 of 8 Well: Thurston 7-9-9-24 WA 8/11/2011

reclamation success on road disturbance areas that shall be reseeded after construction has ceased, preferably in the fall before ground freeze.

- All production equipment will be painted Covert Green to help blend in with surrounding vegetation.
- On all locations a permanent reference point must be established prior to any reclamation activities.
   This reference point helps to establish the criteria for successful reclamation based on the Green River District Reclamation Guidelines.
- A dike/berm will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater-treater). It will be constructed of compacted subsoil, be impervious, hold 110% of the capacity of the largest tank, and be independent of the back cut.
- The reserve pit will be fenced on three sides during drilling operations and on the fourth side when the rig moves off location. It will be fenced, and the fence maintained, until the pit undergoes reclamation efforts.
- To insure impermeability, the reserve pit will be lined with a 16 ml or greater liner and felt prior to spudding.
- Reserve pits will be closed as soon as possible, but no later than 180 days from time of drilling/well
  completion, unless the BLM Authorized Officer gives an extension. Pits must be dry of fluids or they
  must be removed via vac-truck or other environmentally acceptable method prior to backfilling, recontouring and replacement of topsoil. Mud and cuttings left in pit must be buried at least 3-feet
  below re-contoured grade. The operator will be responsible for re-contouring any subsidence areas
  that develop.
- Any hydrocarbons in the reserve pit will be removed immediately upon well completion; in accordance with 43 CFR 3162.7-1. Pits must be free of oil and other liquid and solid wastes prior to filling.
- The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear. The existing access road surface and pad area will be kept free of trash during all operations. All traffic will be confined to the approved disturbed surface area.
- The operator will control noxious weeds and invasive plants along corridors for roads, pipelines, well sites, or other applicable facilities, through a Pesticide Use Permit (PUP).
- An Interim Surface Reclamation Plan for surface disturbance on the well pad, access road, and
  pipeline has been completed and will be followed for reclamation of the surface. At a minimum, this
  will include the Best Management Practice of the reshaping of the pad to the original contour to the
  extent possible; the re-spreading of the top soil up to the rig anchor points; and, reseeding the
  unused area using appropriate reclamation methods (Thurstons reclamation plan).
- The interim/final seed mix for reclamation will be:

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8/11/2011

Table 2.3.5 Interim/Final Reclamation Seed Mixture

Common name	Latin name	lbs/acre	Recommended seed planting depth
Squirreltail grass	Elymus elymoides	3.0	1/4 - 1/2"
Siberian Wheatgrass	Agropyron fragile	2.0	1/2"
Needle and Thread	Stipa comata	3.0	1/2"
Bluebunch Wheatgrass	Pseudoroegneria spicata	3.0	1/2"
Shadscale	Atriplex confertifolia	0.50	1/2"
Gardner's saltbush	Atriplex gardneri	0.50	1/2"
Scarlet globemallow	Sphaeralcea coccinea	0.10	1⁄8□−1⁄4"

- All pounds are pure live seed.
- All seed and mulch will be certified weed free.
- Rates are set for drill seeding; double rate if broadcasting.

Following well plugging and abandonment, the location, access roads, pipelines, and other facilities shall be fully reclaimed. All disturbed surfaces shall be reshaped to approximate the original contour; the top soil re-spread over the surface; and, the surface re-vegetated. The surface of approved staging areas where construction activities did not occur may require disking or ripping and reseeding. In order the Final Abandonment Notice to be approved Thurston must meet the requirement for successful reclamation as outlined in the Green River District Reclamation Guidelines.

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8/11/2011

## DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

- Production casing cement shall be brought up and into the surface casing. The minimum cement top is 200 ft above the surface casing shoe.
- A variance is granted for Onshore Order #2 Drilling Operations III. E. "Blooie line discharge 100 feet from well bore and securely anchored" Blooie line can be 40 feet for air rig drilling operations.
   All requirements will be adhered to covering air/gas drilling operations as described in Onshore Order #2 III. E. 1. Drilling Operations, Special Drilling Operations, air/gas drilling.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is
  encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal
  Field Office.

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• The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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#### **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written communication
  and must be received in this office by not later than the fifth business day following the date on
  which the well is placed on production. The notification shall provide, as a minimum, the following
  informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs,

Page 8 of 8 Well: Thurston 7-9-9-24 WA 8/11/2011

core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
  Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
  future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
  BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
  hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall
  be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a
  suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be
  obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval
  of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCE		FORM 9		
DIVISION OF OIL, GAS, AND MINING			<b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-5217		
SUND	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	sals to drill new wells, significantly deepen ugged wells, or to drill horizontal laterals. U		7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Oil Well			8. WELL NAME and NUMBER: THURSTON 7-9-9-24 WA		
2. NAME OF OPERATOR: THURSTON ENERGY OPERATION	NG		<b>9. API NUMBER:</b> 43047514100000		
3. ADDRESS OF OPERATOR: 365 W. 50 N. Ste W-8 , Verna		NE NUMBER: 16 Ext	9. FIELD and POOL or WILDCAT: DEVILS PLAYGROUND		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2067 FNL 2070 FEL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: SWNE Section: 09	rp, RANGE, MERIDIAN: Township: 09.0S Range: 24.0E Meridian: S	5	STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT	, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	☐ ACIDIZE	☐ ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	CHANGE WELL NAME		
8/17/2011	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	✓ CONVERT WELL TYPE		
SUBSEQUENT REPORT	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	☐ TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL		
☐ DRILLING REPORT	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:	□ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12 DESCRIPE PROPOSED OR CO	DMPLETED OPERATIONS. Clearly show all pert		ļ <del>.</del>		
	ell type from an oil well to a ga	- , , ,	•		
	II it will be drilled as a Wasatch				
			Approved by the		
			Utah Division of Oil, Gas and Mining		
			Date: 09/14/2011		
			1 lest Clant		
			By:		
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE			
Patti Cox	435 789-8580	Business Manager			
SIGNATURE N/A		<b>DATE</b> 8/17/2011			

	OTATE OF UTALL			FORM 9		
STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES				ELEASE DESIGNATION AND OFFICE NUMBER		
DIVISION OF OIL, GAS, AND MINING				5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-5217		
SUNDR	RY NOTICES AND REPORT	TS ON W	VELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	oposals to drill new wells, significan reenter plugged wells, or to drill hon n for such proposals.			7.UNIT or CA AGREEMENT NAME:		
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: THURSTON 7-9-9-24 WA		
2. NAME OF OPERATOR: THURSTON ENERGY OPERA	ATING			9. API NUMBER: 43047514100000		
3. ADDRESS OF OPERATOR: 365 W. 50 N. Ste W-8 , Vei	rnal, UT, 84078 214	<b>PHON</b> 4 704-389	<b>E NUMBER:</b> 96 Ext	9. FIELD and POOL or WILDCAT: DEVILS PLAYGROUND		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2067 FNL 2070 FEL				COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 09 Township: 09.0S Range: 24.0E M	Meridian: S		STATE: UTAH		
11. CHEC	K APPROPRIATE BOXES TO INDI	ICATE NAT	TURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION			TYPE OF ACTION			
,	ACIDIZE	☐ ALT	TER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	Сн	ANGE TUBING	CHANGE WELL NAME		
2/22/2012	CHANGE WELL STATUS	Сог	MMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	☐ FRA	ACTURE TREAT	NEW CONSTRUCTION		
Date of Work Completion:	OPERATOR CHANGE		JG AND ABANDON	PLUG BACK		
	PRODUCTION START OR RESUME		CLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	_					
Date of Spau.	REPERFORATE CURRENT FORMATION		ETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
	TUBING REPAIR		NT OR FLARE	WATER DISPOSAL		
DRILLING REPORT Report Date:	WATER SHUTOFF		TA STATUS EXTENSION	✓ APD EXTENSION		
	WILDCAT WELL DETERMINATION	ОТН	HER	OTHER:		
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly sh APD Extension.	now all perti	nent details including dates, d	Approved by the Utah Division of Oil, Gas and Mining  Date: February 28, 2012  By:		
NAME (PLEASE PRINT) Kayti Hill	<b>PHONE NU</b> 435 789-8580	-	<b>FITLE</b> Office Manager			
SIGNATURE N/A	-		DATE 2/22/2012			



#### The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

#### Request for Permit Extension Validation Well Number 43047514100000

**API:** 43047514100000

Well Name: THURSTON 7-9-9-24 WA

Location: 2067 FNL 2070 FEL QTR SWNE SEC 09 TWNP 090S RNG 240E MER S

Company Permit Issued to: THURSTON ENERGY OPERATING

Date Original Permit Issued: 12/21/2010

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

···
<ul> <li>If located on private land, has the ownership changed, if so, has the surface agreement been updated?</li> <li>Yes </li> <li>No</li> </ul>
<ul> <li>Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?</li> <li>Yes</li> <li>No</li> </ul>
<ul> <li>Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?</li> <li>Yes</li> <li>No</li> </ul>
<ul> <li>Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?</li> <li>Yes</li> <li>No</li> </ul>
• Has the approved source of water for drilling changed? 🔘 Yes 📵 No
<ul> <li>Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul>
• Is bonding still in place, which covers this proposed well?   Yes   No

Signature: Kayti Hill Date: 2/22/2012

Title: Office Manager Representing: THURSTON ENERGY OPERATING



## State of Utah

#### DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 4, 2013

Thurston Energy Operating 365 W. 50 N. Ste. W-8 Vernal, UT 84078

Re: APD Rescinded – Thurston 7-9-9-24 WA, Sec. 9, T.9, R.24E,

Uintah County, Utah API No. 43-047-51410

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 21, 2010. On February 28, 2012 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 4, 2013.

A new APD must be filed with this office for approval <u>prior</u> to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason

**Environmental Scientist** 

cc: Well File

Bureau of Land Management, Uintah





## **United States Department of the Interior**

**BUREAU OF LAND MANAGEMENT** 

Green River District Vernal Field Office 170 South 500 East Vernal, UT 84078

http://www.blm.gov/ut/st/en/fo/vernal.html

APR 17 2015



IN REPLY REFER TO: 3160 (UTG011)

Chris Curton
Thurston Energy Operating Company
4925 Greenville Ave., #840
Dallas, TX 75206

RECEIVED

MAY 04 2015

DIV. OF OIL, GAS & MINING

Dear Chris:

43 047 51410

The referenced Applications for Permit to Drill (APD) have expired. According to our records, no known activity has transpired at the approved location. In view of the foregoing, this office is notifying you that the approval of the referenced applications has expired. If you intend to drill at these locations in the future, a new Application for Permit to Drill must be submitted.

Lease	Well	Aliquot	Sec., T., R.	Date Rec'd	Date Exp'd
UTSL-071725C	Thurston 5-27-9-24	SWNW	Sec. 27-T9S-R24E	10/20/2010	8/10/2013
UTSL-071725C	Thurston 15-27-9-24	SWSE	Sec. 27-T9S-R24E	10/20/2010	8/10/2013
UTU-0145459	Thurston 9-7-9-24	SWNW	Sec. 7-T9S-R24E	10/20/2010	8/10/2013
UTU-0145459	Thurston 10-7-9-24	NWSE	Sec. 7-T9S-R24E	12/30/2010	8/10/2013
UTU-5217	Thurston 7-9-9-24 WA	SWNE	Sec. 9-T9S-R24E	12/16/2010	8/11/2013
UTU-31266	Thurston 13-19-9-24	Lot 4	Sec. 19-T9S-R24E	10/20/2010	8/16/2013
UTU-31266	Thurston 8-20-9-24	SENE	Sec. 20-T9S-R24E	10/20/2010	8/10/2013
UTU-31266	Thurston 13-20-9-24	SWSW	Sec. 20-T9S-R24E	10/20/2010	8/10/2013

This office requires a letter confirming that no surface disturbance has been made for these drill sites. Any surface disturbance associated with the approved location of these wells is to be rehabilitated. A schedule for this rehabilitation must be submitted to this office. Your cooperation in this matter is appreciated.

If you have any questions regarding this matter, please contact Robin R. Hansen at (435) 781-3428.

Sincerely,

/s/ Jerry Kenczka

Jerry Kenczka
Assistant Field Manager
Lands & Mineral Resources

cc: bcc: **UDOGM**Well File

I&E Asst.